

CLAIMS

1. A balance weight assembly for a vehicle wheel, which assembly comprises:
a body including a hook portion having a cross-sectional shape corresponding to a flange edge portion of a vehicle wheel rim and a cavity for holding a separate high-density weight which is secured in the cavity by a fill material having adhesive properties.
2. The balance weight assembly as recited in claim 1, wherein a metal clip provides said hook portion and is partially embedded within the body which is formed of polymeric material.
3. The balance weight assembly as recited in claim 2 wherein the cavity-containing body is made of an injection-molded polymeric resin.
4. The balance weight assembly as recited in claim 3 wherein the body is injection-molded about the metallic clip as an insert in the mold used in the process.
5. The balance weight assembly as recited in claim 4 wherein during the injection process, the metallic clip which has a straight body section is positioned closer to the surface of the mold that will define the inner wall of the hollow body that defines the cavity than to the surface that defines the opposite outer surface.
6. The balance weight assembly as recited in claim 1, wherein the high-density weight is a solid body of tungsten.
7. The balance weight assembly as recited in claim 1, wherein the high-density weight is a body of tungsten powder having an apparent density of not less than 10 g/cc compounded with a polymeric binder.

8. The balance weight assembly as recited in claim 1, wherein the high-density weight is a metal rod.

9. The balance weight assembly as recited in claim 8, wherein the high-density rod is secured inside the cavity by a polymeric material having an adhesive properties which fills the remainder of the cavity.

10. The balance weight assembly as recited in claim 9, wherein the cavity has at least one retainer protruding from its interior surface about which said polymeric material is securely hardens.

11. A balance weight assembly for attachment to a flange edge portion of a vehicle wheel rim, which assembly comprises:

a one-piece molded polymeric component comprising a clip portion having a cross-sectional shape corresponding to a flange edge portion of a wheel rim, and a hollow body portion, proportioned to contain a high-density weight which can be secured therewithin to prevent inadvertent separation.

12. The balance weight assembly as recited in claim 11, wherein the body is elongated and the clip portion is present at least at both longitudinal ends of the body.

13. The balance weight assembly as recited in claim 11, wherein the one-piece body and clip is made by injection-molding using a polymer having high creep resistance and/or high impact strength.

14. The balance weight assembly as recited in claim 11, wherein a high-density metal rod weight is secured in said cavity.

15. The balance weight assembly as recited in claim 14, wherein the high-density

weight is a solid body of tungsten.

16. The balance weight assembly as recited in claim 11, wherein a high-density weight made of tungsten powder, having an apparent density of not less than 10 g/cc, compounded with a polymeric binder, is secured in said cavity.

17. The balance weight assembly as recited in claim 11, wherein the high-density weight is secured within the cavity by a material having adhesive properties.

18. The balance weight assembly as recited in claim 17, wherein the adhesive material is a hardened polymer which essentially fills the cavity in a region surrounding the weight.

19. The balance weight assembly as recited in claim 18, wherein the cavity has retainers protruding from two surfaces thereof, with the polymeric material surrounding and securely engaging said retainers.

20. The balance weight assembly as recited in claim 11, wherein the molded body is colored-pigmented or electroplated.